

I CLAIM:

1. An insulating material formed between conductive elements in an integrated circuit, comprising a polysiloxane network incorporating carbon-silicon bonding and having a dielectric constant of less than about 3.3.
2. The insulating material of Claim 1, having a dielectric constant of less than about 3.2.
3. The insulating material of Claim 1, having a carbon content of between about 5% and 20% relative to a silicon content.
4. The insulating material of Claim 1, wherein the conductive elements comprise metal runners.
5. An integrated circuit, comprising:
  - a first conductive element providing a first electrical path of the circuit;
  - a second conductive element providing a second electrical path of the circuit;
  - and
  - a unitary insulating layer directly contacting and sandwiched between the first and second conductive elements, the insulating layer comprising polysiloxane incorporating carbon therein and having a dielectric constant of less than about 3.5.
6. The integrated circuit of Claim 5, wherein the insulating layer has a dielectric constant of less than about 3.3.
7. The integrated circuit of Claim 6, wherein the first and second conductive elements are metal runners.
8. The integrated circuit of Claim 6, wherein the first and second conductive elements are transistor active areas within a semiconductor substrate.
9. The integrated circuit of Claim 8, wherein the insulating layer comprises a sidewall spacer.
10. The integrated circuit of Claim 9, wherein the first conductive element is a transistor gate electrode and the second conductive element is a contact to a transistor active area.